

CLAIMS

What is claimed is:

1. A method for using a readout-limited optical media comprising:
 - (a) providing the media with at least one layer that embodies a readout-limiting mechanism, said at least one layer comprising an additive that does not interfere with readability of said media for a duration of a readout period; and
 - (b) activating said additive upon exposure to a source of optical radiation that is suitable for reversing said layer from an optical readout inhibiting state to an optical readout enabling state such that, when activated, said additive undergoes a transformation that maintains the layer in the optical readout inhibiting state.
2. The method of claim 1, where said additive is comprised of a leuco dye.
3. The method of claim 1, where said layer is comprised of a color former 3-[2,2-bis(4-diethylaminophenyl)vinyl]-6-dimethylaminophthalide and where said additive is comprised of benzoyl leucomethylene blue.
4. The method of claim 1, wherein when in said readout inhibiting state said layer exhibits an optical wavelength absorption range that includes an optical readout wavelength of said media, thereby inhibiting optical readout of said media.
5. The method of claim 4, where exposure to said source of optical radiation causes said additive to oxidize and to exhibit an optical wavelength absorption range that overlaps with said optical wavelength absorption range of said layer, thereby permanently inhibiting the readability of said media.
6. The method of claim 1, where exposure to said source causes said color-forming layer to photobleach and said additive to oxidize, where the oxidation of said additive permanently inhibits the optical readability of said media.
7. A method for using a readout-limited optical media comprising:

(a) providing the media with at least one color-forming layer that embodies a readout-limiting mechanism;

(b) providing a protective layer that overlies said at least one color-forming layer, said protective layer comprising an additive that does not interfere with readability of said media for a duration of a readout period; and

(c) activating said additive upon exposure to a source of optical radiation that is suitable for reversing said color-forming layer from an optical readout inhibiting state to an optical readout-enabling state such that, when activated, said additive undergoes a transformation from an optical readout enabling state to an optical readout inhibiting state.

8. The method of claim 7, where said additive is comprised of a leuco dye.

9. The method of claim 7, where said color-forming layer is comprised of 3-[2,2-bis(4-diethylaminophenyl)vinyl]-6-dimethylaminophthalide and where said additive is comprised of benzoyl leucomethylene blue.

10. The method of claim 7, wherein when in said optical readout inhibiting state said color-forming layer exhibits an optical wavelength absorption range that includes an optical readout wavelength of said media, thereby inhibiting optical readout of said media.

11. The method of claim 10, where exposure to said source of optical radiation causes said additive to oxidize and to exhibit an optical wavelength absorption range that overlaps with said optical wavelength absorption range of said color-forming layer, thereby permanently inhibiting the readability of said media.

12. The method of claim 7, where exposure to said source causes said color-forming layer to photobleach and said additive to oxidize, where the oxidation of said additive permanently inhibits the optical readability of said media.

13. An optically readable media comprising an information-encoding layer and at least one color-forming layer that embodies an optical readout-limiting mechanism, said at least one color-forming layer comprising an additive that does not interfere with the optical

readability of said media for a duration of a readout period, said additive, upon exposure to a source of optical radiation that is suitable for reversing said color-forming layer from an optical readout inhibiting state to an optical readout enabling state, undergoes a transformation that maintains the color-forming layer in the optical readout inhibiting state.

14. The media of claim 13, where said additive is comprised of a leuco dye.
15. The media of claim 13, where said color-forming layer is comprised of 3-[2,2-bis(4-diethylaminophenyl)vinyl]-6-dimethylaminophthalide and where said additive is comprised of benzoyl leucomethylene blue.
16. The media of claim 13, wherein when in said readout inhibiting state said color-forming layer exhibits an optical wavelength absorption range that includes an optical readout wavelength of said media, thereby inhibiting optical readout of said media.
17. The media of claim 16, where exposure to said source of optical radiation causes said additive to oxidize and to exhibit an optical wavelength absorption range that overlaps with said optical wavelength absorption range of said color-forming layer, thereby permanently inhibiting the readability of said media.
18. The media of claim 16, where exposure to said source causes said color-forming layer to photobleach and said additive to oxidize, where the oxidation of said additive permanently inhibits the optical readability of said media.
19. An optically readable media comprising an information-encoding layer and at least one color-forming layer that embodies an optical readout-limiting mechanism; a protective layer that overlies said at least one color-forming layer, said protective layer comprising an additive that does not interfere with readability of said media for a duration of a readout period; said additive, upon exposure to a source of optical radiation that is suitable for reversing said color-forming layer from an optical readout inhibiting state to an optical readout enabling state, undergoes a transformation from an optical readout enabling state to an optical readout inhibiting state.

20. The media of claim 19, where said additive is comprised of a leuco dye.

21. The media of claim 19, where said color-forming layer is comprised of 3-[2,2-bis(4-diethylaminophenyl)vinyl]-6-dimethylaminophthalide and where said additive is comprised of benzoyl leucomethylene blue.

22. The media of claim 19, wherein when in said optical readout inhibiting state said color-forming layer exhibits an optical wavelength absorption range that includes an optical readout wavelength of said media, thereby inhibiting optical readout of said media.

23. The media of claim 22, where exposure to said source of optical radiation causes said additive to oxidize and to exhibit an optical wavelength absorption range that overlaps with said optical wavelength absorption range of said color-forming layer, thereby permanently inhibiting the readability of said media.

24. The media of claim 19, where exposure to said source causes said color-forming layer to photobleach and said additive to oxidize, where the oxidation of said additive permanently inhibits the optical readability of said media.